

REMARKS

In the Office Action, the Examiner rejected claims 1-12. However, the Examiner also indicated that claims 3-5 and 10-12 contain allowable subject matter. Applicant thanks the Examiner for her careful attention to this matter and for the indication of allowable subject matter. By the present Response, Applicant amends claims 1, 6, and 7 to further clarify the claimed subject matter. Upon entry of the amendments, claims 1-12 will remain pending in the present patent application. Applicant respectfully requests reconsideration of the above-referenced application in view of the foregoing amendments and the following remarks.

Rejections Under 35 U.S.C. § 112

In the Office Action, the Examiner rejected claims 1-12 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Examiner alleged that the claim language of claims 1, 6, and 7 is confusing and that claims 1-12 are incomplete for omitting essential structural cooperative relationships of the recited elements. As indicated above, Applicant amended claims 1, 6, and 7 to further clarify the claimed subject matter. Further, while Applicant respectfully submits that the present claims, particularly as amended, will be clear to one skilled in the art, Applicant believes that reference to the specification may be of great help to the Examiner in the instant case.

As an initial matter, Applicant respectfully notes that a claim satisfies 35 U.S.C. § 112, second paragraph, if the claim apprises one of ordinary skill in the art of its scope, thus providing clear warning to others as to what constitutes infringement of the patent. *See Solomon v. Kimberly-Clark Corp.*, 55 U.S.P.Q.2d 1279, 1283 (Fed. Cir. 2000); *see also* Manual of Patent Examining Procedure, Section 2173.02. Conversely, if the language of the claim is such that a person of ordinary skill in the art would not understand how infringement could be avoided, then a rejection under Section 112,

second paragraph, would be appropriate. *See id.*; *see also Morton Int'l, Inc. v. Cardinal Chem. Co.*, 28 U.S.P.Q.2d 1190, 1195 (Fed. Cir. 1993). Further, although the Examiner may take exception to the terms used in the claims, she is reminded that the patentee may be his own lexicographer. *Ellipse Corp. v. Ford Motor Co.*, 171 U.S.P.Q. 513 (7th Cir. 1971), *aff'd*, 613 F.2d 775 (7th Cir. 1979), *cert. denied*, 446 U.S. 939 (1980).

Applicant thanks the Examiner for her suggestion regarding amending claims 1 and 6 to recite that the input and measurement signals are received from the windings of the electrical machine. *See* Office Action mailed August 10, 2005, page 2. However, Applicant respectfully notes that this suggestion is contrary to the actual operation of the claimed resistance temperature detector. Further, Applicant refers the Examiner to paragraphs [0030] and [0031], as well as FIG. 4, of the application. One skilled in the art will appreciate that the each claimed resistive element of claims 1 and 6, respectively, can receive an input or measurement signal and that the output signal from the resistive element varies according to the resistance of the element. *See* Application, paragraph [0030], lines 3-6; paragraph [0031], lines 10-16. Still further, one skilled in the art will appreciate that temperature can be determined from the resistance. *See id.* at paragraph [0031], lines 13-16.

Additionally, the Examiner noted that it was unclear how the resistive element is structurally related to the rest of the device and how it receives an input signal. With respect to the latter, Applicant has amended claims 1 and 6 to recite that the resistive element receives an input or measurement signal from a lead, such as lead wire 40 or connection plate 46. *See* Application, paragraph [0030], lines 2-6; FIG. 4. With respect to the former, the claims explicitly recite that the structural relationship between the resistive element and the detector insulating system is that the resistive element is disposed within the detector insulating system. *See, e.g.*, FIGS. 4 and 5.

In light of the foregoing amendments and remarks, Applicant respectfully requests withdrawal of the rejection of claims 1-12 under 35 U.S.C. § 112. While Applicant believes that the meaning of the present claims are clear, particularly in view of the specification, Applicant kindly invites the Examiner to contact the undersigned representative to discuss the claims and the operation of the disclosed resistance temperature detector if any confusion remains.

Rejections Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1 and 2 under 35 U.S.C. § 103(a) as unpatentable over Matlock et al. (U.S. Patent Publication No. 20040263342) in view of Weiler (U.S. Reissue Patent No. 31,685) and Gramsamer et al. (U.S. Patent Publication No. 20040091017). The Examiner also rejected claims 1 and 2 as unpatentable over Chu et al. (U.S. Patent No. 5,019,760) in view of Beihoff et al. (U.S. Patent 4,683,515). Further, the Examiner rejected claims 6, 8, and 9 as unpatentable over Matlock et al. in view Gramsamer et al. and claim 7 as unpatentable over the combination of Matlock et al. and Gramsamer et al. in view of Lanoue et al. (U.S. Patent No. 4,751,488) or Tanigaki et al. (U.S. Patent No. 4,547,769), alternatively. Applicant respectfully traverses these rejections.

Legal Precedent

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd. App. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes *all* of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex*

parte Clapp, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988).

Omitted Features of Independent Claims 1 and 6

Applicant respectfully notes that the Matlock et al., Weiler, Gramsamer et al., Chu et al., Beihoff et al., Lanoue et al., and Tanigaki et al. references fail to disclose each element of independent claims 1 and 6. For instance, independent claim 1 recites a “detector insulating system *having a capacitance per unit area approximately equal to or greater than the capacitance per unit area of the winding insulating system*” (emphasis added). Independent claim 6 recites a “detector insulating system having a capacitance per unit area of sufficient magnitude that a voltage stress level experienced by any air voids or low dielectric materials adjacent to the resistive element resulting from voltage applied to the windings during operation is below a stress level that would cause partial discharge in such voids and materials.” Because the cited references fail to disclose such an element, the cited references cannot support a *prima facie* case of obviousness with respect to independent claims 1 and 6.

In the Office Action, the Examiner stated that “the use of the particular materials ... for the insulation systems, *absent any criticality*, is only considered to be the ‘optimum’ materials that a person having ordinary skill in the art ... would have found obvious to provide” (emphasis added). Applicant, however, respectfully notes that the present application provides evidence of the criticality of the dielectric properties of the insulator systems recited in claims 1 and 6. Particularly, paragraphs [0033]-[0037] of the present application highlight the problem faced by the inventor (premature failure of existing resistance temperature detectors), discovery of the root of the problem (partial

discharge within an insulation system of such detectors that causes structural failure of a resistive element), and a solution to the problem corresponding to the present recitations regarding the capacitance of the materials forming the detector insulating system. As discovered by Applicant, use of insulating materials with capacitive properties other than those provided in the claims can result in partial discharge within an insulation system and lead to the exact premature failure of a resistance temperature detector that the present application is directed to alleviating. It is thus apparent that the electrical properties, particularly the capacitive properties, of the materials used in the detector insulating system are of critical importance to the presently claimed invention. Consequently, Applicant respectfully requests that the Examiner attribute the above recitations their proper patentable weight during the examination process.

The prior art of record does not teach or disclose a “detector insulating system having a capacitance per unit area approximately equal to or greater than the capacitance per unit area of the winding insulating system,” as recited in independent claim 1. Further, the prior art of record does not teach or disclose a “detector insulating system having a capacitance per unit area of sufficient magnitude that a voltage stress level experienced by any air voids or low dielectric materials adjacent to the resistive element resulting from voltage applied to the windings during operation is below a stress level that would cause partial discharge in such voids and materials,” as recited in independent claim 6. Indeed, the Examiner has not alleged that such teachings are present in the prior art. As a result, the prior art of record cannot support a *prima facie* case of obviousness with respect to the present claims. Consequently, the present claims are believe allowable over the prior art of record.

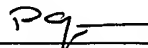
For these reasons, Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. § 103 and allowance of claims 1-12.

Conclusion

In view of the remarks and amendments set forth above, Applicant respectfully request allowance of the pending claims. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

Date: November 10, 2005



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